INTEGRATED DEEPWATER SYSTEM (IDS)

The Need is Real
The Time is Now

27 September 2004

RADM Patrick M. Stillman
Program Executive Officer

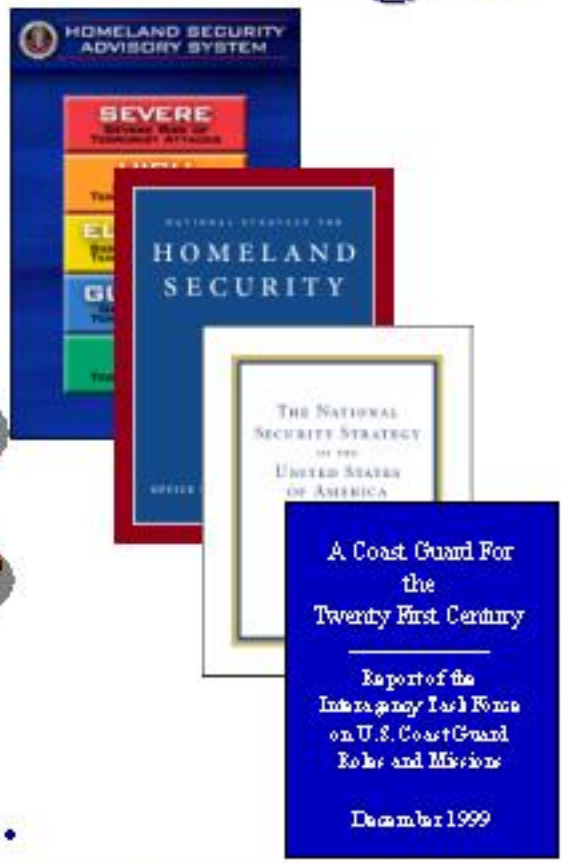
Homeland Security

DEEPWATER

Agenda

- Maritime Challenges Have Changed
- DHS Strategic Plan
- Homeland Security Strategy
- Maritime Domain Awareness
- Integrated Deepwater System
- Partnerships
- Aviation Assets
- Surface Assets
- C4ISR Milestones
- National Fleet

Maritime Challenges Have Changed



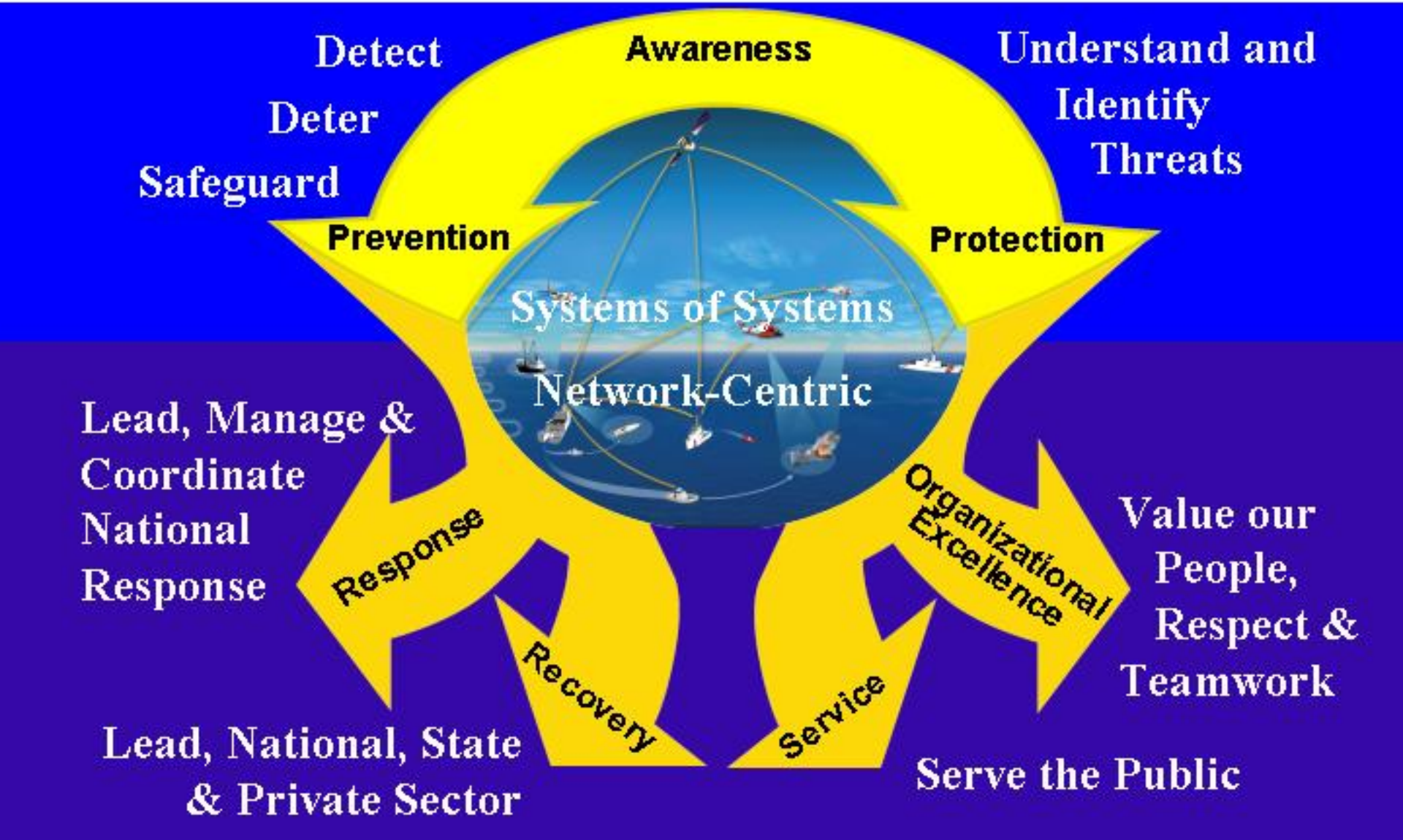
So Must The Federal Response…

Asymmetric warfare waged by rogue states or international terrorists, drug trafficking and illegal migration, and degradation of the marine environment—will likely intensify in tomorrow's increasingly interconnected world.

Homeland Security

DEEPWATER

DHS Strategic Plan



Homeland Security Strategy

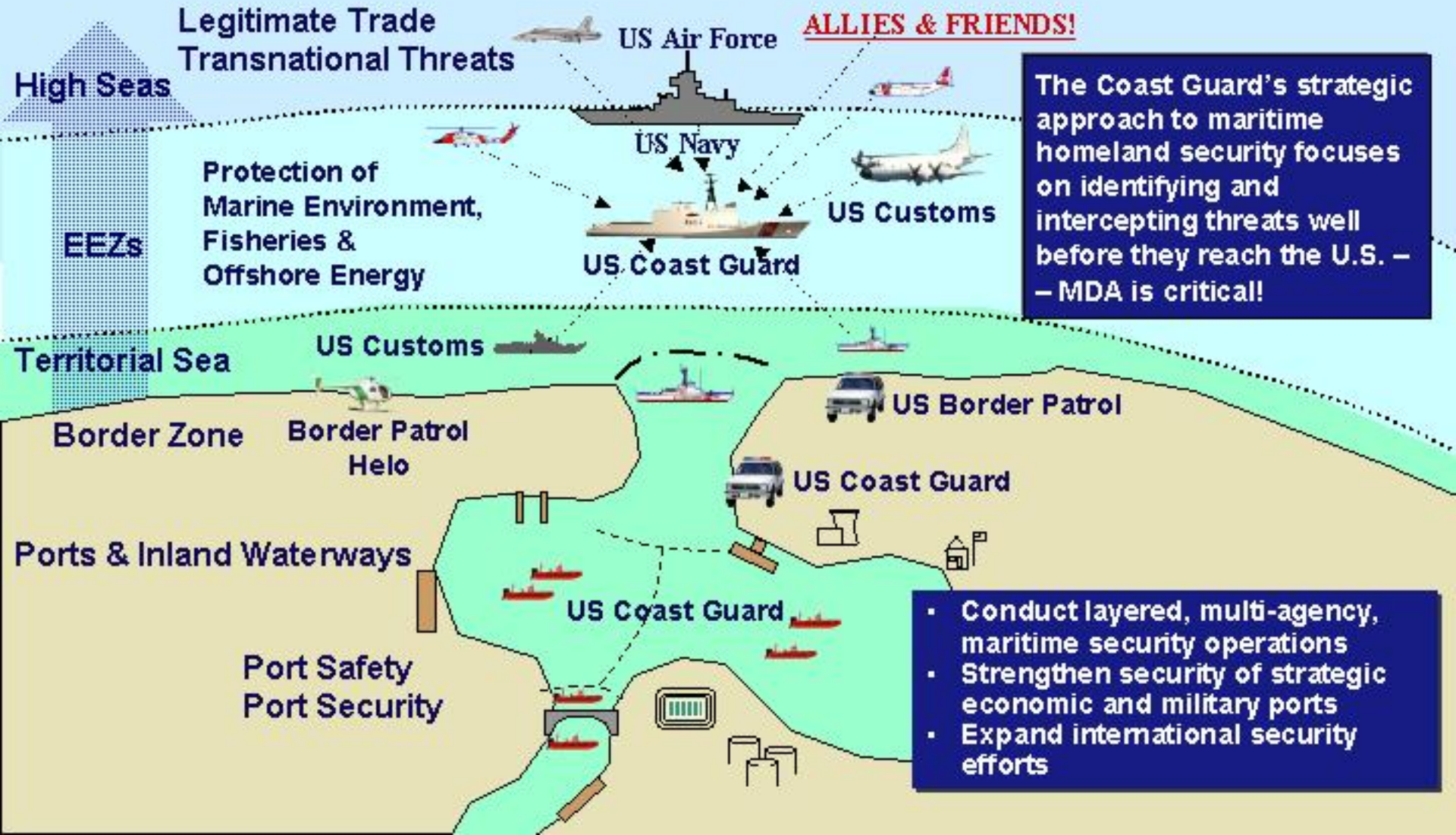
Comprehensive National Strategy

	Deepwater Mission Task Sequence	*Coast Guard Maritime Homeland Security Strategy*	*National Strategy for Homeland Security*
Surveil		Conduct layered maritime security operations	• Create "smart borders";
Detect		Establish & maintain a baseline level of maritime security Strengthen the port security posture	• Increase the security of international shipping containers;
Classify		Build & leverage Maritime Domain Awareness Develop required capabilities, improve core competencies & recapitalize the CG	• Implement the Aviation and Transportation Security Act of 2001;
Identify		Organize & sustain a public private sector partnership; increase international partnership	• Recapitalize the U.S. Coast Guard; and
Prosecute		Prepare, equip & train forces to transition between & conduct HLS & HLD ops	• Reform immigration services.

Homeland Security

DEEPWATER

Layered Approach to Maritime Domain Awareness



Solution: Integrated Deepwater System

Performance Based:

- Focus on capabilities not assets; Not a one for one replacement

Acquisition Strategy:

- *Partner* with system integrator
- Acquire *integrated system of* surface, air, C4ISR, and logistics *systems*

Overarching Objective:

- *Maximize Operational Effectiveness while Minimizing Total Ownership Costs*

Maritime Domain Awareness
The Deepwater C4ISR Contribution

Homeland Security

Maritime Domain Awareness is the effective understanding of anything associated with the global maritime environment that could impact the security, safety, economy, or environment of the United States.

The Deepwater C4ISR system is a network-centric system designed to ensure seamless interoperability

- Shared tracks and real-time data streams.
- On-line intelligence.
- Robust and seamless connectivity and continuous coordination.
- Stand-alone capability.
- Supplemented by active and passive sensors.
- Expanded area of surveillance and detection areas.
- Improved communications with all federal, state and local agencies and merchant shipping.

Operational effectiveness enhanced by common maritime operational picture

Common Operational Picture

"Fusion Center" (Air & Marine Interdiction Coordination Center)

To Fusion Center

F16 with Anti-Ship Missile

Pouncer Cues

US Customs Citation

Border Patrol Blackhawk

HITRON-Helo with Machine Guns

AEROSTAT

To Mission Control Equipment

Pouncer Cues

Border Patrol

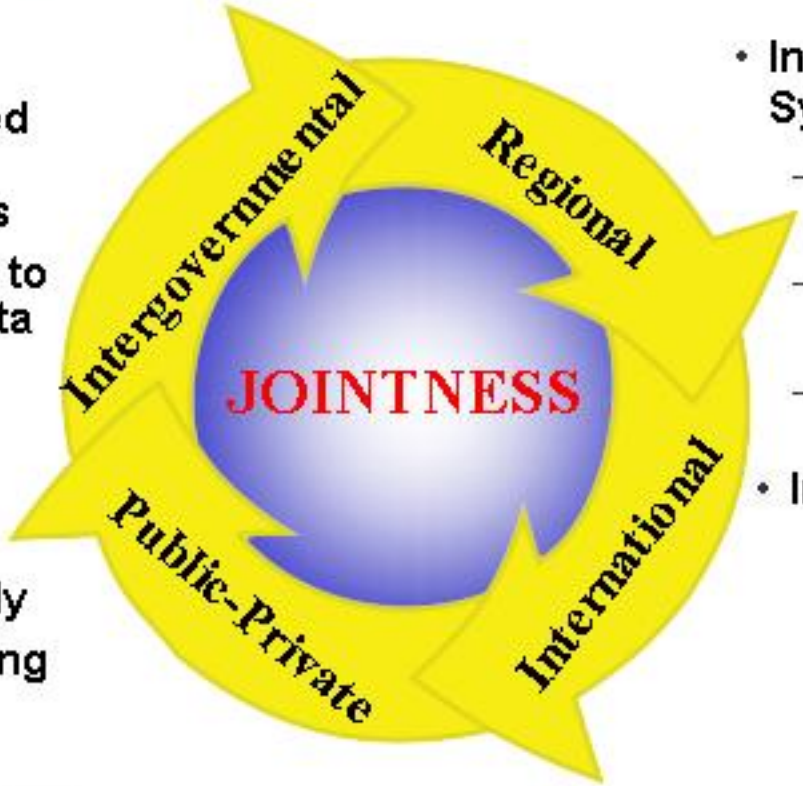
VUAV Coverage

Border Patrol Boat

Target image, location & data transmitted to pouncers direct via Common Operational Picture

Partnerships

- Interconnectivity
  - Real-time, protected communications across all agencies
  - Automated access to other agencies' data bases
- Interoperability
  - Units that can function seamlessly
  - A common operating picture
  - Coordinated acquisition processes



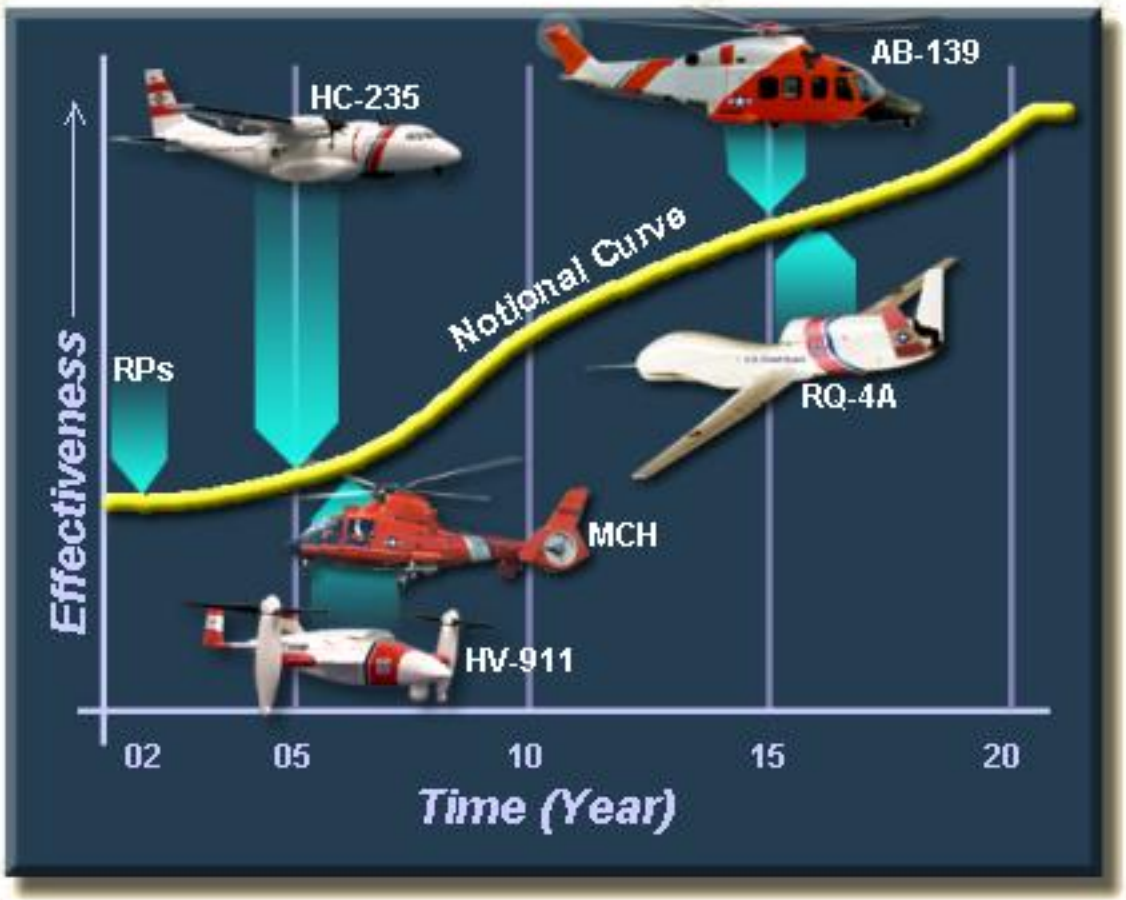
- Integrated Coast Guard Systems
  - Integrated Product Teams (IPT)
  - Earned Value Management (EVM)
  - Balanced Scorecard
- International
  - International Maritime Organization
  - Proliferation Security Initiative
  - Maritime Domain Awareness

Blending national and international elements of maritime military power and maritime civil authority in a collaborative way.

Homeland Security

DEEPWATER

The Aviation Plan at Contract Award



Capability Improvements

- **All Aviation Assets Include Night/All-weather Capability with Radar and EO/IR Sensors**
- **Increased Communications and Common Operating Picture Capability**
- **MPA and VUAV Planned for Introduction in First Five Years**
- **HH-65 Re-engine Acceleration to Provide for Safe Operations**


Long Range Surveillance


Maritime Patrol Aircraft


High Altitude Endurance


Multi-mission Cutter Helicopter


VTOL Recovery and Surveillance Aircraft


VTOL Unmanned Air Vehicle

The Aviation Assets

Communications
- Military SATCOM
- INMARSAT-B
- COMSATCOM
- HF/VHF/UHF radios
- Tactical Data Links
- SIPRNET & CGDN+
- Crypto Devices

Sensors
- Surface/Air/Weather/ ISAR radars
- (Near Future - Multi-Mode Radar)
- Radio Direction Finding
- Electro-Optical / Infrared
- Night Vision Goggles

Integrated C2
- Common C2 System
- Multi-Operational Consoles
- Local Tactical Picture
- Common Tactical Picture

Homeland Security

DEEPWATER

Maritime Patrol Aircraft (MPA)

EADS CASA CN235-300M

- Proven military twin turboprop
- In service as MPA
- Most cost-effective MPA alternative
- Quick change to cargo or passenger role
- Rear cargo ramp

Specifications

Length	70 ft 2 in
Wingspan	84 ft 8 in
Cabin Length	31 ft 8 in
Cabin Height	6 ft 2 in
Cabin Width	8 ft 11 in
Maximum Take-off Weight	36,370 lbs
Maximum Payload	11,942 lbs
Maximum Cruising Speed	234 kts
Number of 88" x 108" Pallets	4
Engines	2 x General Electric CT7-9C3 of 1750 SHP each
Propellers	Hamilton Standard 14RF-37 (Four-bladed)

Homeland Security

DEEPWATER

Emerging Systems

- 6 C-130Js at APO Elizabeth City
- 350 kt cruise speed
- 2075 NM radius of action
- Fully missionized by 2007
- 2 interim missionized in 2004

- Bell 911 Eagle Eye VUAV
- Shipboard deployable
- 220 kt dash, 200 kt cruise speed
- VUAV Preliminary Design Review completed
- VUAV Tech Readiness Review completed
- Begin VUAV Detailed Design

Homeland Security

DEEPWATER

HH-65 Re-Engine Project

Tasking from Coast Guard for emergent action to re-engine fleet of HH-65 to return it to unrestricted safe and reliable operations

The engine

- HH-65 will use the Turbomeca Ariel 2C2 engine
  - First 4 engines for 2 aircraft delivered ahead of schedule

The aircraft

- American Eurocopter (AEC) on track with helicopter modifications to accommodate the new engines
- First deliveries of kit material arrived at Elizabeth City, NC
  - Incremental deliveries supporting the installation schedule

Installation

- First aircraft re-engining in process
  - First flight on track for August
  - Delivery of first fully re-engined aircraft in September
- Partnership completing installation with support from CG, ICGS, Turbomeca, and AEC
  - All parties working together to ensure success

Air Summary

- Deepwater's total-aviation solution of manned and unmanned aircraft, at completion, will deliver 80 percent more flight hours than today's legacy systems and provide improved airborne use of force and vertical-insertion capabilities.
- These improvements will be of inestimable value to operational commanders in remedying today's tremendous burden of balancing the mismatch between inadequate resources to growing mission requirements.
- The inventory of HH-60J and HH-65 helicopters will be progressively modernized with new avionics and system upgrades.
- New maritime patrol aircraft, helicopters, and VUAVs will significantly improve our coastal and surface-surveillance capabilities.

Surface Implementation: Summary

Maritime Security Cutter, Large (WMSL)

- Funding in FY04 and FY05 request provide design and development of WMSL lead ship and building second WMSL.
- Startfab for this first-in-class occurred on 9 September 2004, with the keel laying to follow, in April 2005. The anticipated date of delivery for the lead ship will be the second quarter of 2007.
- Naval Operational Capacity (NOC) and DHS capability incorporated into design.

Maritime Security Cutter, Medium (WMSM)

- Congress funded in FY04 appropriations due to heightened operational tempo of the Coast Guard and the need to meet an expanding mission portfolio with increasingly deteriorating fleet assets.
- The start of the design and final requirements work for the 341-foot medium endurance cutter contract signed June 2004
- Accelerated the launch by approximately three years.
- Potential for synergy with LCS (Littoral Combat Ship).

Surface Implementation: Summary

Maritime Patrol Coastal (WPC)

- Initiated Concept and Preliminary design to assess composite hull; expectation of reasonable period of time to demonstrate the suitability and performance of the material in a marine environment before the entire class is built of same material.
- As a result of continued deterioration of the material condition of the Island Class 110-foot patrol boats, the decision was made to advance capabilities for the design and development of the WPC to replace existing 110-foot patrol boats.
- Goal is to accelerate WPC delivery in 2006

Maritime Patrol Boat (WPB)

- Currently eight cutters under contract; hulls 9-12 are under active discussion.
- MATAGORDA, METOMPKIN, PADRE & ATTU delivered; 4 hulls at Bollinger (VASHON, NUNIVAK, MONHEGAN & MANITOU).
- Challenges faced include the quality of the product, the Short Range Prosecutor, TEMPEST equipment, the hull paint, and the post delivery maintenance availability (PDMA).

C4ISR Milestones

Legacy Cutter Upgrades

- SIPRNET & Classified LAN:
  - WMEC 270 – 12 complete, 13 in all
  - WMEC 378 – 6 complete, 2 more scheduled complete Sept 04, 9th to be complete Oct 04, 3 added to Deepwater contract
  - WMEC 210 – Plan to start Sept 04

C4ISR System Developments

- On Schedule, per Plan
- Successful Increment 1 initial Critical Design Review July 04
- WMSL C4ISR Production Readiness review conducted Sept. 04

Legacy Shore Upgrades

- SIPRNET & Classified LAN
  - *CAMSLANT, Complete*
  - *CAMSPAC, Complete*

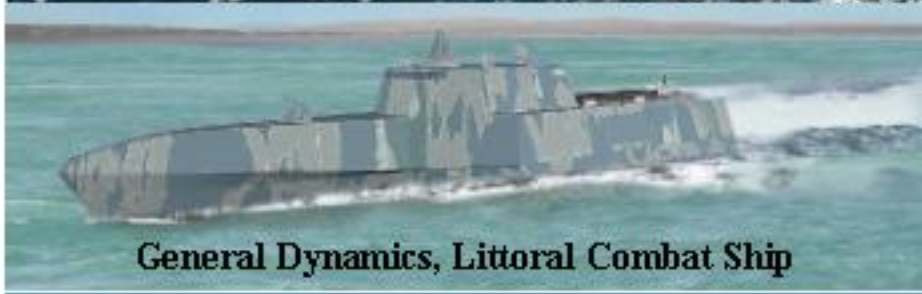
Maritime Domain Awareness Center ribbon cutting April 2004

Homeland Security

DEEPWATER

Interoperability: National Fleet Status

- Leveraging the Navy's Littoral Combat Ship research-and-development efforts
- Integrate cutting-edge technologies and pursue transformation initiatives
- Common support (e.g. training and logistics)
- Increase operational effectiveness and interoperability when Navy ships and CG cutters are jointly deployed.



Homeland Security

DEEPWATER

Visit the IDS Web Page for latest Developments

Address http://www.uscg.mil/hq/g-a/deepwater/

TRANSFORMING AMERICA'S SHIELD OF FREEDOM

Integrated Deepwater System

Home | Contact Us | Site Map | About the Site | Links

- Program
- System
- Partners
- FAQs
- Media
- Resources
- PEO's Corner
- Deepwater International

Homeland Security

United States Coast Guard

SHOWCASING THE NEW MARITIME DOMAIN AWARENESS CENTER (MDAC)

Admiral Thomas H. Collins, Commandant of the U.S. Coast Guard, joined New Jersey Congressmen Jim Saxton and Frank LoBiondo to assist representatives from Lockheed Martin and Northrop Grumman during the ribbon-cutting ceremony opening the Maritime Domain Awareness Center (MDAC) at the Lockheed Martin facilities in Moorestown, New Jersey on Friday, April 23, 2004.

The new $9.4 million MDAC is a 46,000-square foot state-of-the-art facility designed to develop, test, and integrate assets and systems being produced to support the Coast Guard's Integrated Deepwater System (IDS) and other Homeland Security programs. One of nine labs in the Maritime Systems Engineering Center (MSEC), the MDAC facility can perform development, integration, installation, checkout, and acceptance testing of C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and

NEW TO THE PROGRAM?

The Integrated Deepwater System is critical to the Coast Guard's future and to America's ability to safeguard our homeland and maritime security for generations to come. Learn more about the IDS Program

INTERESTED IN THE STATUS OF THE IDS PROGRAM?

Keep up-to-date on the IDS Program by checking out our Recent Milestones and the planned phases for Deepwater assets.

IN THE NEWS...

RAND Study: The U.S. Coast Guard's Deepwater Force Modernization Plan: Can It Be Accelerated? Will It Meet Changing Security Needs?

Check us out: www.uscg.mil/deepwater